

**REMARKS****A. Overview**

In the Notice for to File Missing Parts dated April 4, 2002, the USPTO required submission of new drawings. A set of new drawings has been submitted with the response to that paper, which is being concurrently filed with this Preliminary Amendment.

As can be seen in that response, the new set of drawings substantially condenses the total number of figures. This requires changes, both to the Brief Description of the Drawings and the Detailed Description of the Exemplary Embodiment, to accurately match with the new figures. This Preliminary Amendment makes such changes. No new matter is added.

**B. New Drawings**

To assist the Examiner in reviewing this matter, below is a table which indicates general correspondence between the originally filed figures and the new figures which accompany the response to the Notice to File Missing Parts.

<b>ORIGINAL FIGURE #</b>	<b>NEW FIGURE #</b>
1A	1
1B	1
1C	1
1D	1
1E	2
1F	2
2A	2
2B	2
3A	2
3B	2

3C	2
4A	2
4B	2
4C	2
4D	2
4E	2
4F	2
4G	2
4H	2
4I	2
5A	4
5B	6C
5C	6A
5D	6B
5E	6C
5F	10A-E
5G	10A-E
5H	7A-E
5I	8A-D
5J	5
6A	2
6A-2	3A-B
6B	3A-B
6C	3A-B
6D	12A-F
6E	12A-F
6F	12A-F
6G	12A-F

6H	12A-F
6I	12A-F
6J	12A-F
6K	12A-F
6L	12A-F
6M	12A-F
7A	13A
7B	13B
7C	13C
7D	13D
7E	13E
7F	13F
7G	13G
7H	3A-B
7I	3A-B
7J	3A-B
7K	3A-B
7L	3A-B
7M	3A-B
7N	3A-B
7O	3A-B
7P	13A
7Q	13A
7R	13A
7S	13A
7T	13A
7U	13A
7V	13H

7W	13A
8A	9A-D
8B	9A-D
8C	9A-D
8D	11A-E
9A	3
9B	3
9C	3

It is respectfully submitted that the number of figures can be condensed while retaining the information needed for the application. Approval and entry of the new figures is respectfully requested.

#### **C. Amendments to Specification**

This Preliminary Amendment submits substitute paragraphs (or deletes paragraphs) to correspond the specification with the new figures. Also, minor obvious grammatical or punctuation changes have been made. Attached to this Preliminary Amendment is a version showing the changes in revision marks for assistance of the Examiner. Entry and approval of these changes is respectfully requested.

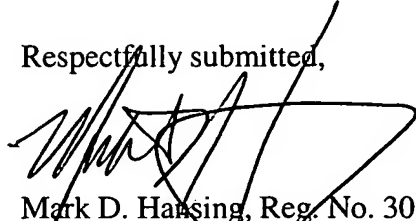
#### **D. Conclusion**

It is respectfully submitted that this Preliminary Amendment conforms the written specification with the new figures submitted with the concurrently-filed response to the Notice to File Missing Parts. Entry and approval is respectfully requested, as is forwarding of this application for examination on the merits.

It is not believed any fees and/or extensions of time are required for entry of this Preliminary Amendment. If any such fee and /or extension of time is necessary and has be

inadvertently overlooked, please consider this a request therefore and charge any required fee to deposit account 26-0084.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Mark D. Harsing', is written over the typed name and firm information.

Mark D. Harsing, Reg. No. 30,643  
McKEE, VOORHEES & SEASE, P.L.C.  
801 Grand Avenue, Suite 3200  
Des Moines, Iowa 50309-2721  
Phone No. (515) 288-3667  
Fax No. (515) 288-1338  
**CUSTOMER NO: 22885**

Attorneys of Record

-wrw -

Attachment: Version With Markings to Show Changes Made



AMENDMENT — VERSION WITH MARKINGS 2002  
TO SHOW CHANGES MADE

RECEIVED  
TC 2800 MAIL ROOM

In the Specification

- LOCATION AND TYPE OF REVISION: Beginning at page 3, line 24 and ending at page 3, line 27, please revise the paragraph as follows:

Figures 1A-D, and 1F are is an assembled perspective views of an embodiment according to the present invention. Figure 1E2 is an exploded view of ~~these other~~ Figures 1. ~~In some circumstances, hidden lines are not used, but structure which would otherwise be hidden is indicated by solid lines.~~

- LOCATION AND TYPE OF REVISION: Beginning at page 3, line 28 and ending at page 3, line 29, please delete the paragraph.

~~Figures 2A-B are various plan and sectional views of component 12 (the cone or bulb cone or mounting mogul) of Figures 1A-F.~~

- LOCATION AND TYPE OF REVISION: Beginning at page 4, line 1 and ending at page 4, line 3, please revise the paragraph as follows:

~~Figures 3A-C are plan views and details of reflector 18 of Figures 1A-F and a reinforcing ring 130 (see also Figure 6A) that can be used with reflector 18.~~ Figure 3A - B is an exploded view of an arc lamp, lamp holder, parabolic reflector insert, and electrical connector assembly.

- LOCATION AND TYPE OF REVISION: Beginning at page 4, line 4 and ending at page 4, line 5, please delete the paragraph.

~~Figures 4A-I are isometric views of a box assembly 16 of Figures 1A-F for an igniter circuit.~~

- LOCATION AND TYPE OF REVISION: Beginning at page 4, line 6 and ending at page 4, line 7, please revise the paragraph as follows:

Figures ~~5A-J~~ 4, 5, and 6A-C are isometric views and details of ~~an~~ the HID arc tube and electrical connector assembly 14 of Figures 1A-F 3A-B

- LOCATION AND TYPE OF REVISION: Beginning at page 4, line 8 and ending at page 4, line 9, please delete the paragraph.

~~Figures 6A1, 6A2, 6B-M are isometric views and details of lamp holder assembly 22 of Figures 1A-F.~~

- LOCATION AND TYPE OF REVISION: Beginning at page 4, line 10 and ending at page 4, line 11, please revise the paragraph as follows:

~~Figures 7A-W are isometric and details of parabolic reflector assembly 16 of Figures 1A-F and how it mounts in reflector 18.~~ Figures 7A-E and 8A-D are still further enlarged isometric views of exemplary arc lamps that can be used in the lamp and connector assembly of Figures 4, 5, and 6A-C.

- LOCATION AND TYPE OF REVISION: Beginning at page 4, line 12 and ending at page 4, line 13, please revise the paragraph as follows:

Figures ~~8~~ 9A-D are isometric and details views of the connector assembly 28 of Figures ~~1A-F~~ 1 and 3A-B.

- LOCATION AND TYPE OF REVISION: Beginning at page 4, line 14 and ending at page 4, line 14, please revise the paragraph as follows:

Figures 9A and B are exploded views of parts from Figures 1A-F. Figures 10A-D are isometric views and details of connector 104.

- LOCATION AND TYPE OF REVISION: Beginning at page 4, line 15 and ending at page 4, line 15, please revise the paragraph as follows:

Figure 9C is plan views of a firewall 120. Figures 11A-D are isometric views and details of connector 304.

- LOCATION AND TYPE OF REVISION: After the paragraph beginning at page 4, line 15 and ending at page 4, line 15, please insert the following paragraphs:

Figures 12A-F are isometric views and details of the lamp holder assembly of Figures 3A-B.

Figures 13A-H are isometric and detail views of the parabolic reflector assembly of Figures 3AB and how it mounts in reflector 18.

- LOCATION AND TYPE OF REVISION: Beginning at page 5, line 11 and ending at page 5, line 20, please revise the paragraph as follows:

Figures ~~1A-F~~ 1 and 2 illustrate an exemplary embodiment of a fixture 10, according to the present invention. As shown in Figures 1 and 2, the major sections or parts of fixture 10 include a cone 12 enclosing a connector assembly 28 and providing a connection to an adjustable mounting elbow 14 on one end and a reflector /lens assembly 18/20 on the other. A box assembly 16 is mounted to cone 12 and houses an igniter. A lamp holder assembly 22 is connected to the base of reflector 18 and provides for snap-in and out of lamp assembly 24. A paraboloid assembly 26 is also removably mounted to the lamp holder assembly 22, and serves to



reflect light energy from lamp 24, but is removably mounted to allow access to cone 12 for installation and maintenance.

- LOCATION AND TYPE OF REVISION: Beginning at page 5, line 21 and ending at page 5, line 27 please revise the paragraph as follows:

Figure 1A shows fixture 10 substantially assembled, but ~~in a type of see-through illustration that with dashed-lines~~ that shows how the interior parts are positioned. ~~Figures 1B-1D are similar to Figure 1A, but in line drawing form.~~ Figure 1E illustrates in more detail how leads 102L (left) and 102R (right) are generally positioned in assembled form between lamp or arc tube 100 and connection assembly 28, which is in operative communication with an electrical power source (not shown).

- LOCATION AND TYPE OF REVISION: Beginning at page 5, line 28 and ending at page 6, line 5, please revise the paragraph as follows:

Figure ~~1E~~2 illustrates the major parts of fixture 10 in exploded fashion. As can be appreciated, when installing fixture 10, connection assembly 28 is mounted inside cone 14, and reflector 18 to cone 14 by means known within the art using the reinforcing ring 18 shown at Figure ~~3C~~1 and 2. Lamp holder 22 is also mounted to the reinforcing ring. Paraboloid reflector assembly 26 has mounting structure that allows it to be removably locked into a holding position in lamp holder assembly 22. Likewise lamp assembly 24 is removably mountable into lamp holder assembly 22.

- LOCATION AND TYPE OF REVISION: Beginning at page 6, line 6 and ending at page 6, line 15, please revise the paragraph as follows:

Thus, once assembled, to work on fixture 10, a worker can disconnect the finger-safe connections 102L/R and 304L/R to disconnect electrical power to lamp 100. This can be done easily, without risk that even the worker's fingers can contact live electrical surfaces. Finger-safe connections are available commercially. Those shown in the Figures are specially made to

allow a worker to grip and manipulate them, and so that they can handle and have longevity in the environment of fixture 10 and the electrical power and heat experienced by it. An example of such finger-safe connections can be found at co-pending U.S. Serial Number 09/076,278, commonly-owned by the owner of this application, and incorporated by reference herein.

- LOCATION AND TYPE OF REVISION: Beginning at page 6, line 17 and ending at page 6, line 18, please revise the paragraph as follows:

Cone 12 is shown ~~and dimensioned~~ at Figures ~~2A-B1 and 2~~. It functions conventionally, except that ~~ignitor~~ igniter box 16 is attachable as discussed below.

- LOCATION AND TYPE OF REVISION: Beginning at page 6, line 22 and ending at page 6, line 23, please revise the paragraph as follows:

Likewise, elbow 14 is substantially shown in detail at Figures ~~2A-B1 and 2~~. It too functions conventionally.

- LOCATION AND TYPE OF REVISION: Beginning at page 6, line 26 and ending at page 6, line 31, please revise the paragraph as follows:

Box assembly 16 is shown in detail at Figs. ~~4A-41 and 2~~. Note particularly that it encloses and houses an igniter 17 for fixture 10 (see Fig. 2). But also, note that it does not have to include ballast for fixture 10. In this embodiment, ballast for fixture 10 is located remotely (e.g. down at the bottom of the pole elevating fixture 10). This allows for much easier access to the ballasts and removes the ballast from the fixture, and its weight and bulk.

- LOCATION AND TYPE OF REVISION: Beginning at page 7, line 17 and ending at page 7, line 19, please revise the paragraph as follows:

Reflector 18 and its reinforcing ring are shown at Figures ~~3A-C~~ 1, 2, and 3A-B and function conventionally. The reflecting properties of reflector 18 can be selected according to need.

- LOCATION AND TYPE OF REVISION: Beginning at page 7, line 22 and ending at page 7, line 29, please revise the paragraph as follows:

By referring to Figures ~~5A-J~~ 3A-B, 4, 5, 6A-C, 7A-E, and 8A-D, the HID arc lamp or tube 100 is illustrated in detail. It is a ~~2000-watt~~ 2000-watt lamp, double-ended and unjacketed. Note that electrical leads 102L and R are completely covered along their lengths by an electrically insulating sleeving 103 (see Figure ~~5E4~~), are electrically insulated at the ends of lamp 100 by ceramic or other insulating members and have finger-safe male connectors at opposite ends. Therefore, there are no electrically conducting surfaces that a worker can directly contact with his/her fingers.

- LOCATION AND TYPE OF REVISION: Beginning at page 7, line 30 and ending at page 8, line 2, please revise the paragraph as follows:

Further note spring clamps 106L and R at opposite lamp ends which cooperate with lamp holder assembly 22 to essentially allow lamp assembly 24 to be snapped in and out, quickly and easily and without tools (see particularly Figure 5J).

- LOCATION AND TYPE OF REVISION: Beginning at page 8, line 3 and ending at page 8, line 10, please revise the paragraph as follows:

The specific structure of finger-safe connections 104 are shown at Figures ~~5F-H~~ 3A, 4, 6A-C, 9A-D, 10A-E, and 11A-E. The nature of these "finger-safe" connections is that they do not expose electrically conducting surfaces that can contacted directly by human fingers. Thus, even if the connections are electrically live, they will not shock a human even if the human handles them with his/her hands. Further description of finger-safe connections is set forth in

U.S. Serial Number 09/076,278, owned by the owner of the present application, and incorporated by reference herein.

- LOCATION AND TYPE OF REVISION: Beginning at page 8, line 11 and ending at page 8, line 21, please revise the paragraph as follows:

As can be seen in the Figures, particularly Figures ~~1A, 1C, and 1E~~ 1, 2, 3A, and 9A-D, connector assembly 28 mounts (by screws, bolts, or other means) into the interior of cone 12. As shown, see particularly Figures ~~8A-D~~ 3A, 9A-D, and 11A-E, two male finger-safe connections 304L and R (left and right) can be integrally formed in a block that can be screwed, bolted or otherwise fixed to a plate or base of assembly 28. Each male connection 304 is raised from the plate or base, is rectangular or square in cross-section, and has raised tabs basically centered on three or all of its sides, and have distal ends that point generally in parallel towards the opening in cone 12 to reflector 18. Electrical leads from an electrical power source enter the opposite ends of connections 304, are fixed therein, and have exposed conducting surfaces internally of connections 304.

- LOCATION AND TYPE OF REVISION: Beginning at page 8, line 22 and ending at page 9, line 8, please revise the paragraph as follows:

Figures ~~5A-J~~ 3A, 4, 6A-C, and 10A-E illustrate in detail complementary mating finger-safe female connections 104L and R having proximal ends connected to electrical leads 102L and R to opposite ends of arc tube 100. Connections 104 are identical and each has a distal end that matingly slides over a corresponding distal end of a connection 304. Note that the distal ends of connections 104L and R have medial axial slots on two opposite sides that extend from distal-most open ends a distance inwardly and then stop, and have holes on the other two opposite sides. These slots and holes align with the raised tabs on the exterior surfaces of the sides of connections 304 such that when connections 104 are first brought over connections 304, the shape of the connections help guide them together, and then, the raised tabs of 304 enter and slide in the slots of 104 until the other raised tabs of 304 reach the holes in two sides of 104.

Those raised tabs enter the holes and basically snap in place and lock connections 104 and 304 together, resisting axial separation. Connections 104 have internally exposed, but finger-safe conduction surfaces that are configured to frictionally engage or contact exposed conducting surfaces internal of 304 to create an electrical connection through each mated set 104R/304L and 104R/304L.

- LOCATION AND TYPE OF REVISION: Beginning at page 9, line 17 and ending at page 9, line 24, please revise the paragraph as follows:

Note that connections 104 are quite elongated. This allows the proximal ends of 104 (those nearest to the opening between cone 12 and reflector 18), to be close to that opening for easier access and gripping by a worker, but also allows the actual electrical junction between connectors 104 and 304 to be farther away from that opening; and thus farther away from heat generated inside reflector 18 during operation of lamp 100, some of which is conducted to the exterior of reflector 18 and cone 12. This is beneficial to deter or reduce any effect of such significant heat on these connections.

- LOCATION AND TYPE OF REVISION: Beginning at page 9, line 25 and ending at page 10, line 10, please revise the paragraph as follows:

Figures ~~5H and I~~ 7A-E and 8A-D illustrate in detail structure associated with lamp 100. In particular in the embodiment of Figure 7A-E, lamp 100 can include a coating 110 all around lamp 100 that blocks and/or absorbs UV radiation generated in lamp 100. Such coatings are available from commercial entities, ~~as indicated in Figure 5H~~. Coatings to block UV radiation are also disclosed in commonly owned U.S. Serial Number 09/076,277, incorporated by reference herein. Such coatings do not allow any more UV radiation from lamp 100 than glass lenses do in conventional fixtures. They are also formulated to adhere to lamp 100 and remain for a useful life even in the high temperatures created by HID lamps. Additionally, lamp 100 could also have another coating 112 on or near a portion of its body. Here coating 112 is a reflective coating that, when lamp 100 is installed, is positioned on the outer facing side of lamp 100. It reflects or returns light that otherwise would travel directly out fixture 10 through lamp

100 and to reflectors 18 and/or 26. This light energy can then be collected and directed by those reflectors. Reflective coating 112 therefore can assist in diminishing glare that otherwise might be caused by light emanating directly out of fixture 10 without being controlled by any reflector.

- LOCATION AND TYPE OF REVISION: Beginning at page 10, line 15 and ending at page 10, line 17, please revise the paragraph as follows:

Other details of lamp 100 in this embodiment are shown at Figures ~~5A-J~~7A-E. An automatic location structure (see, e.g., detail A of Fig. 7) can be built in so that reflective coating 112 always ends up in the proper position.

- LOCATION AND TYPE OF REVISION: Beginning at page 10, line 18 and ending at page 11, line 2, please revise the paragraph as follows:

One way to accomplish this is to utilize the spring clips 106L and R shown in detail in Figures ~~5A and J~~5, for example. They are clamped to opposite ends of lamp 100 (other means or methods may be used to hold them in position once installed). Figures ~~5B and C~~4 and 6A-C show the clips in relation to arc tube 100, and in particular to the optional reflector 112. Figures ~~6a 1-3A~~ then shows in more detail receivers 134L and R at the distal ends of outwardly extending arms 132L and R connected to ring 130, all of which forms lamp holder assembly 22. Receivers 134 are u-shaped and have holes on opposite sides of the u-shape aligned along a transverse axis. Clips 106 have shoulders on opposite sides configured to snap into place in holes in receivers 134 when lamp 100 is brought into place in holder assembly 22. Clips 106 fixed in a predetermined way to lamp 100 such that when the shoulders enter the holes in receivers 134, the correct rotational position of lamp 100 is automatically assured. Thus, the worker that is installing or relamping the lighting fixture can do so without tools, and having rotational position of lamp 100, and for example reflector 112, automatic.

- LOCATION AND TYPE OF REVISION: Beginning at page 11, line 3 and ending at page 11, line 5, please revise the paragraph as follows:

To remove lamp 100, simply, quickly and manually without tools, one simply grabs the outward extended ends of spring clips 106, and squeezes them together to release the shoulders of clips 106 from the holes in receivers 134.

- LOCATION AND TYPE OF REVISION: Beginning at page 11, line 8 and ending at page 11, line 12, please revise the paragraph as follows:

Figures ~~6A-M~~ 1, 2, 3A-B, and 12A-F detail lamp holder assembly 22. Note particularly how lamp brackets 132 extend outwardly angularly from ring 130 to lamp holders 134, which have rectangular openings to receive the spring clamp and releasably seat lamp 100 in place. Wire clips 136 allow leads 102 to be removably secured along brackets 132.

- LOCATION AND TYPE OF REVISION: Beginning at page 11, line 15 and ending at page 11, line 22, please revise the paragraph as follows:

Figures ~~7A-W~~ 1, 2, 3A-B and 13A-H detail an embodiment of paraboloid reflector 200. Vertical and horizontal brackets 202 and 204 cooperate with clamps 206 to grasp reflector 200. This structure insulates this glass reflector from metal to reduce the potential for breakage. Ceramic blankets can be placed on the back of reflector 200 to help insulate the interior of cone 12 from heat. Also, a firewall 210 can be mounted as shown. Assembly 26, along with spring clips 208 (see Figures ~~7M-O~~ 3A), allow reflector 200 to be quickly and easily installed and removed, without tools.

- LOCATION AND TYPE OF REVISION: Beginning at page 11, line 25 and ending at page 11, line 29, please revise the paragraph as follows:

Lamp leads 102L and R are connectable and disconnectable to electrical power by releasable connection to the finger safe receivers 304L and R mounted on bracket 300 which in

turn is mountable in the interior of cone 12 (see Figures ~~8A-D4~~, 6A-C, 10A-E, and 11A-E).

Wires 302L and R are directed for connection to an electrical power source.

- LOCATION AND TYPE OF REVISION: Beginning at page 12, line 3 and ending at page 12, line 4, please revise the paragraph as follows:

Figures ~~9A and C3A-B~~ illustrate in exploded or isolated fashion certain of the parts discussed above.

- LOCATION AND TYPE OF REVISION: Beginning at page 12, line 18 and ending at page 12, line 24, please revise the paragraph as follows:

Access to connections 104 and 304 is just the reverse. The lens is opened. A cable (Figure ~~7V13H~~) could be fixed between the lens and the reflector to prevent it from falling to the ground. Parabolic reflector 26 can be manually removed (a cable could also be connected between it and the fixture). The worker need only pull axially outward gently but with enough force to overcome the capture of the raised tabs of 304 in the openings of 104, to separate connections 104 and 304 and cut off electrical power to lamp 100.

\*\*\*